

# इंटरनेट

# मानक

## Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 5054-24 (2007): Radio Frequency Connectors, Part 24: Radio Frequency Coaxial Connectors with Screw Coupling, Typically for Use in 75 OHM Cable Distribution Systems (TYPE F) [LITD 3: Electromechanical Components and Mechanical Structures for Electronic Equipment]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”



BLANK PAGE



भारतीय मानक

रेडियो आवृत्ति संयोजक

भाग 24 75 ओह्म केबल वितरण प्रणाली में प्रारूपी प्रयोग हेतु  
स्कू कपलिंग सहित रेडियो आवृत्ति समअक्षीय संयोजक (टाइप एफ)

*Indian Standard*

## RADIO FREQUENCY CONNECTORS

PART 24 RADIO FREQUENCY COAXIAL CONNECTORS WITH SCREW COUPLING,  
TYPICALLY FOR USE IN 75 OHM CABLE DISTRIBUTION SYSTEMS (TYPE F)

ICS 33.120.30

© BIS 2007

**BUREAU OF INDIAN STANDARDS**  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI 110002

## NATIONAL FOREWORD

This Indian Standard (Part 24) which is identical with IEC 60169-24 : 1991 'Radio-frequency connectors — Part 24: Radio-frequency coaxial connectors with screw coupling, typically for use in 75 ohm cable distribution systems (Type F)' issued by the International Electrotechnical Commission (IEC) was adopted by the Bureau of Indian Standards on the recommendation of the Electromechanical Components and Mechanical Structures for Electronic Equipment Sectional Committee and approval of the Electronics and Information Technology Division Council.

The text of IEC Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.
- b) Comma (,) has been used as a decimal marker, while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to the following International Standard for which Indian Standard also exists. The corresponding Indian Standard, which is to be substituted in its place, is listed below along with its degree of equivalence for the edition indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
IEC 60169-1 (1987) Radio frequency connectors — Part 1: General requirements and measuring methods	IS 5054 (Part 1/Sec 1) : 1995 Radio frequency connectors: Part 1 General requirements and measuring methods, Section 1 General ( <i>second revision</i> )	Identical

Only the English text of the International Standard has been retained while adopting it as an Indian Standard, and as such the page numbers given here are not the same as in the IEC Publication.

## *Indian Standard*

# RADIO FREQUENCY CONNECTORS

## PART 24 RADIO FREQUENCY COAXIAL CONNECTORS WITH SCREW COUPLING, TYPICALLY FOR USE IN 75 OHM CABLE DISTRIBUTION SYSTEMS (TYPE F)

### 1 Scope

This standard specifies radio-frequency coaxial connectors which are typically for use in 75  $\Omega$  cable distribution systems with a variety of flexible cables, but which may also be used in both matched and unmatched applications. These connectors are in general intended for permanent mounting and for use with infrequent engagement and separation. This standard only specifies interface dimensions.

### 2 IEC type designation

Connectors conforming to this standard shall be designated by reference to this standard.

### 3 Description of connectors

This type of connector has screw locking with a 3/8-32 UNEF-2"B" thread. Normally, the plug will be a free connector, the socket a fixed connector. The design of the plug may be either such that the inner conductor of the cable serves as the male contact, or such that the centre (male) contact is independent of the cable inner conductor. The female contact in the socket shall accept male contacts with a diameter range of 0,51 mm to 1,63 mm (0,020 in to 0,064 in). The inner diameter of the tubular part of the plug is in principle appropriate for cables with diameters over dielectric of 3,71 mm (0,146 in); for larger cables, adaptations are necessary.

#### NOTES

1 – *Caution:* Care should be taken when replacing larger diameter pin contacts (1,63 mm/0,064 in) with those having a smaller diameter (0,51 mm/0,020 in) due to potential mechanical deformation in the socket.

2 – It is important that the center female contact operate effectively over the full range of indicated conductor diameters. A gauging procedure to prove this performance is under consideration.

4 Dimensions – Mating face details

Inch dimensions are original dimensions. The millimetre dimensions are derived from original inch dimensions according to ISO Standard 370.

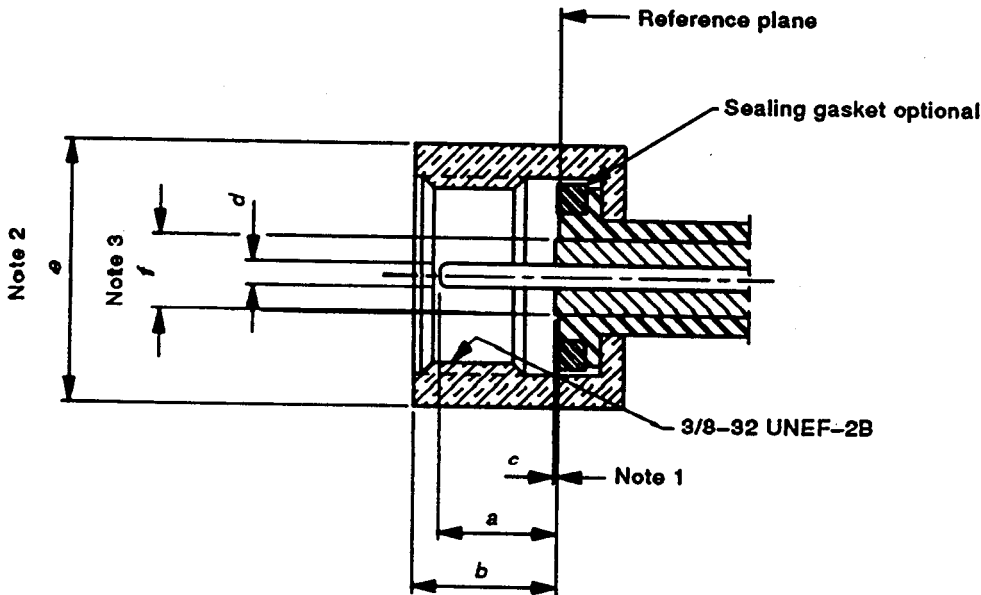


Figure 1 – Connector with pin center contact  
(for dimensions, see table 1)

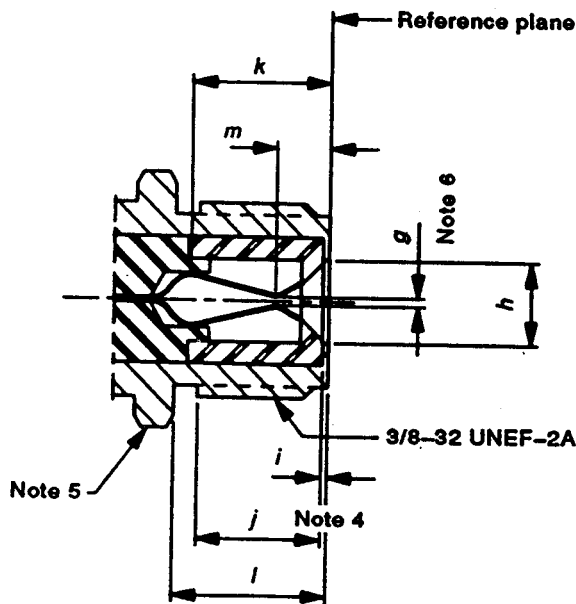


Figure 2 – Connector with socket center contact  
(for dimensions, see table 1)

Table 1 – Dimensions

Reference	Millimetres (mm)		Inches (in)		Note
	Min.	Max.	Min.	Max.	
<i>a</i>	4,95	6,86	0,195	0,270	1  2/dia. 3/dia. 6/dia. dia.
<i>b</i>	–	7,29	–	0,287	
<i>c</i>	–	0,25	–	0,010	
<i>d</i>	0,51	1,63	0,020	0,064	
<i>e</i>	–	12,95	–	0,510	
<i>f</i>	–	3,8	–	0,149	
<i>g</i>	–	–	–	–	
<i>h</i>	3,86	–	0,152	–	
<i>i</i>	0,30	–	0,012	–	
<i>j</i>	5,56	–	0,219	–	
<i>k</i>	7,0	–	0,273	–	4
<i>l</i>	7,59	–	0,299	–	
<i>m</i>	–	4,70	–	0,185	

#### NOTES

1 – Protrusion of dielectric beyond reference plane is applicable to only the 0,146 in nominal dielectric core diameter cables. When larger core diameter cables are used, no protrusion of the dielectric beyond the reference plane is permitted.

2 – Shape of coupling nut is optional; however, provision for wrench tightening should be made. For example, wrench flats.

3 – Applicable to only the 0,146 in nominal dielectric core diameter cables. The 3,8 mm maximum diameter is not applicable when larger core diameter cables are used.

4 – Length of full thread.

5 – Shape of connector body is optional; however, provision for wrench tightening should be made. For example: wrench flats.

6 – Socket contact shall accept a pin contact of 0,51 mm to 1,63 mm (0,020 in to 0,064 in); this shall be satisfied at dimension *m*.



## Bureau of Indian Standards

BIS is a statutory institution established under the *Bureau of Indian Standards Act*, 1986 to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

## Copyright

BIS has the copyright of all its publications. No part of these publications may be reproduced in any form without the prior permission in writing of BIS. This does not preclude the free use, in course of implementing the standard, of necessary details, such as symbols and sizes, type or grade designations. Enquiries relating to copyright be addressed to the Director (Publications), BIS.

## Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Catalogue' and 'Standards: Monthly Additions'.

This Indian Standard has been developed from Doc: No. LITD 03 (1767).

### Amendments Issued Since Publication

Amendment No.	Date of Issue	Text Affected

## BUREAU OF INDIAN STANDARDS \*

### Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110 002

Telephones: 2323 0131, 2323 3375, 2323 9402

Website: [www.bis.org.in](http://www.bis.org.in)

### Regional Offices:

Central : Manak Bhavan, 9 Bahadur Shah Zafar Marg  
NEW DELHI 110 002

Telephones

{ 2323 7617  
{ 2323 3841

Eastern : 1/14, C.I.T. Scheme VII M, V.I.P. Road, Kankurgachi  
KOLKATA 700 054

{ 2337 8499, 2337 8561  
{ 2337 8626, 2337 9120

Northern : SCO 335-336, Sector 34-A, CHANDIGARH 160 022

{ 260 3843  
{ 260 9285

Southern : C.I.T. Campus, IV Cross Road, CHENNAI 600 113

{ 2254 1216, 2254 1442  
{ 2254 2519, 2254 2315

Western : Manakalaya, E9 MIDC, Marol, Andheri (East)  
MUMBAI 400 093

{ 2832 9295, 2832 7858  
{ 2832 7891, 2832 7892

**Branches:** AHMEDABAD. BANGALORE. BHOPAL. BHUBANESHWAR. COIMBATORE. FARIDABAD.  
GHAZIABAD. GUWAHATI. HYDERABAD. JAIPUR. KANPUR. LUCKNOW. NAGPUR.  
PARWANOO. PATNA. PUNE. RAJKOT. THIRUVANANTHAPURAM. VISAKHAPATNAM.